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IN THE CLAIMS

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- 1 1. (currently amended) A method for making measurements during drilling of a borehole, the method comprising:
 - 3 (a) making measurements continuously with a formation evaluation (FE) sensor on a bottom hole assembly (BHA) ~~over a time period that includes~~
~~during said drilling of said borehole;~~
 - 6 (b) concurrently making quality control (QC) measurements while said FE measurements are being made, said QC measurements including at least one measurement not related to motion of said BHA;
 - 9 (c) storing samples of said FE measurements in a working memory of a processor on said BHA;
 - 11 (d) analyzing said QC measurements; and
 - 12 (e) based on said analysis, storing selected samples of said FE measurements in a permanent memory of said processor.
- 14
- 1 2. (original) The method of claim 1 wherein said FE sensor comprises at least one hydrophone responsive to a seismic signal from a surface source.
- 3
- 1 3. (original) The method of claim 1 wherein said FE sensor comprises at least one geophone on a non-rotating sleeve of said BHA, said at least one geophone responsive to a seismic signal from a surface source.

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1 4. (original) The method of claim 1 wherein said at least one measurement is
2 selected from (i) a weight on bit (WOB), (ii) flow rate of a fluid in said borehole,
3 (iii) a level of a tube wave in said borehole, (iv) a level of motion of a non-
4 rotating sleeve on said BHA, and (v) a measurement made by a near bit
5 accelerometer.

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1 5. (original) The method of claim 1 wherein said QC measurements further comprise
2 a measurement of motion of said BHA.

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1 6. (original) The method of claim 1 wherein said FE sensor comprises an
2 accelerometer responsive to a signal from a surface source.

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1 7. (original) The method of claim 1 wherein said FE sensor comprises an acoustic
2 sensor responsive to a signal from a source in another borehole.

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1 8. (currently amended) A method for making measurements during drilling of a
2 borehole, the method comprising:

3 (a) making quality control (QC) measurements using a sensor on a bottom
4 hole assembly BHA during drilling of said borehole, said QC
5 measurements including at least one measurement not related to a motion
6 of said BHA;

7 (b) analyzing said QC measurements;

8 (c) using the results of the snalysis for predicting an initial time when

9 masurements made by a formation evaluation (FE) sensor on said BHA

10 are expected to be of acceptable quality; and

11 (d) making measurements with said FE sensor over a time interval that starts

12 earlier than said initial time.

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1 9. (original) The method of claim 1 wherein said FE sensor comprises an acoustic
2 sensor responsive to a signal from a source at at least one of (i) a surface location,
3 and, (ii) in another borehole.

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1 10. (original) The method of claim 1 wherein said acoustic sensor is one of (i) a
2 hydrophone, (ii) a geophone, and, (iii) an accelerometer.

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1 11. (original) The method of claim 8 wherein said predicting is based at least in part
2 on measurements made by an axial accelerometer on the BHA.

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1 12. (original) The method of claim 8 wherein said predicting is based at least in part
2 on monitoring of a mud flow in said borehole.

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